

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A photodetector comprising:

at least one electron transporting organic material; and

at least one hole transporting organic material,

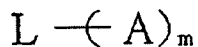
wherein said at least one electron transporting organic material has an ionization potential of 5.8 eV or more,

wherein said ionization potential of said at least one electron transporting organic material is larger than an energy necessary for the highest-level electron of said at least one hole transporting organic material to be taken out to a vacuum infinite far point,

wherein said ionization potential of said at least one electron transporting organic material is larger than an ionization potential of said at least one hole transporting organic material by 0.6 eV or more, and

wherein said at least one electron transporting organic material is a compound represented by formula (I):

Formula (I)



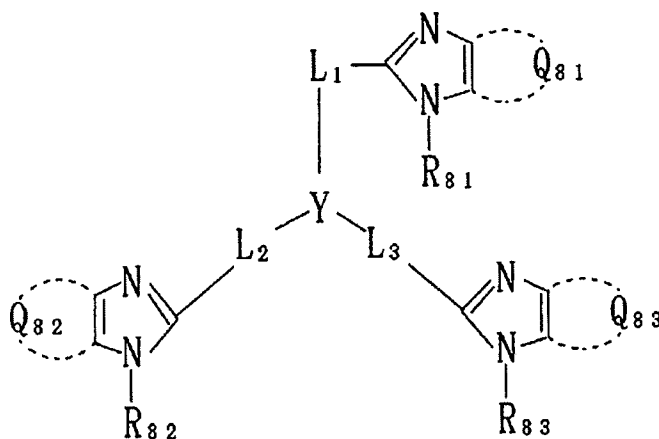
wherein m represents an integer of 2 or more;

L represents a linking group; and

each of A's independently represents a hetero ring group where at least two aromatic hetero rings are condensed to each other, and A's are the same or different,

wherein said at least one electron transporting organic material is a compound represented by formula (VIII):

Formula (VIII)



wherein Q₈₁, Q₈₂ and Q₈₃ each independently represents an atomic group necessary for forming a 6-membered nitrogen-containing aromatic hetero ring;

R₈₁, R₈₂ and R₈₃ each independently represents a hydrogen atom, an aliphatic hydrocarbon group, an aryl group or a hetero ring group;

L₁, L₂ and L₃ each independently represents a linking group; and

Y represents a nitrogen atom or a 1,3,5-benzenetriyl group.

2-3. (canceled).

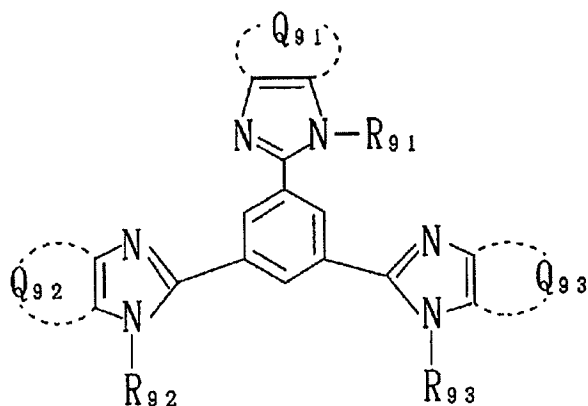
4. (previously presented): The photodetector according to claim 1,

wherein the ionization potential of said at least one electron transporting organic material is 6.0 eV or more.

5-9. (canceled).

10. (previously presented): The photodetector according to claim 1,
wherein said at least one electron transporting organic material is a compound represented by formula (IX):

Formula (IX)



wherein Q₉₁, Q₉₂ and Q₉₃ each independently represents an atomic group necessary for forming a 6-membered nitrogen-containing aromatic hetero ring; and

R₉₁, R₉₂ and R₉₃ each independently represents a hydrogen atom, an aliphatic hydrocarbon group, an aryl group or a hetero ring group.

11. (canceled).

12. (previously presented): The photodetector according to claim 1, further comprising:

at least one transparent electrode; and

at least one electrode,

wherein said at least one electron transporting organic material is interposed between said at least one transparent electrode and said at least one electrode.

13. (canceled).

14. (previously presented): The photodetector according to claim 1, further comprising:

at least one transparent electrode; and

at least one electrode,

wherein said at least one electron transporting organic material and said at least one hole transporting organic material are interposed between said at least one transparent electrode and said at least one electrode.

15. (previously presented): The photodetector according to claim 1,

wherein said at least one electron transporting organic material is deposited in vacuum.

16. (previously presented): The photodetector according to claim 1,

wherein at least one of said at least one electron transporting organic material and said at least one hole transporting organic material is deposited in vacuum.

17. (previously presented): An imaging device comprising a photodetector according to claim 1.

18. (original): The imaging device according to claim 17, further comprising:
a substrate;
a first layer comprising a first photodetector; and
a second layer comprising a second photodetector.

19. (original): The imaging device according to claim 17, further comprising:
a substrate;
a first layer comprising a first photodetector;
a second layer comprising a second photodetector; and
a third layer comprising a third photodetector.

20. (original): The imaging device according to claim 19,
wherein the first photodetector comprises a blue light photodetector; the second photodetector comprises a green light photodetector; and the third photodetector comprises a red light photodetector.